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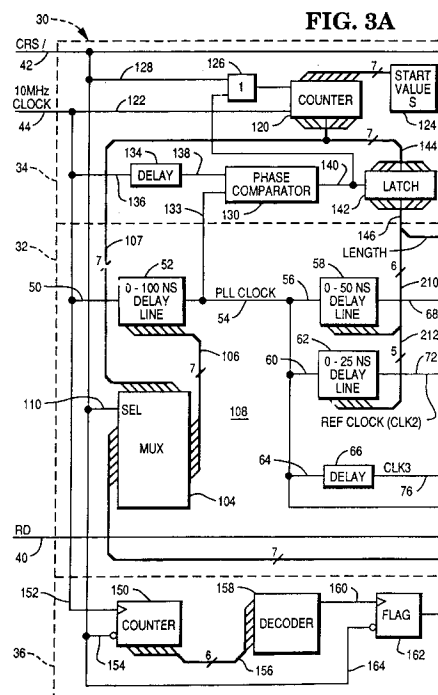
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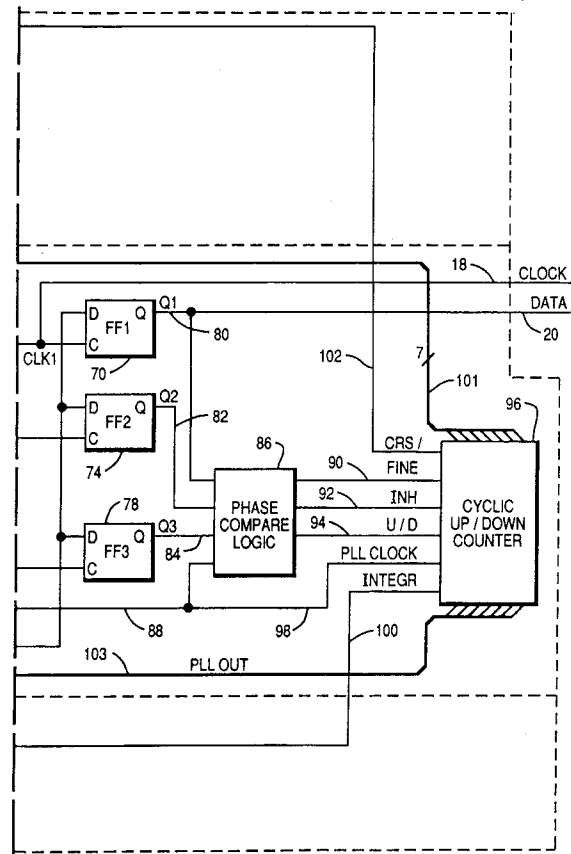
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(54) **Digital phase lock loop decoder.**

(57) A digital phase lock loop decoder for decoding Manchester encoded data includes a controllable delay line (52) which provides a PLL CLOCK signal, which is delayed in respective further delay lines (58,62) and a compensating delay (66), to provide three phased clock signals (CLK1,CLK2,CLK3) defining a window for sampling the incoming data signal (RD). The sampled signals are applied to phase compare logic (86) which provides control signals for a counter (96), in dependence on the samples in the current and previous windows. The 7-bit counter output is fed back to control the phase of the controllable delay line (52) such that the central phased clock signal (CLK2) coincides with the mid-bit data transition. When data is not being received a delay correction section (34) continuously updates a compensating value which compensates for delay variations and is stored in a latch (142) for use during data reception.

**EP 0 425 302 A3**

**FIG. 3B**





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## EUROPEAN SEARCH REPORT

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EP 90 31 1758

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
D,A	US-A-4 584 695 (WONG ET AL.) * column 3, line 40 - column 6, line 45; figure 5 * ---	1-12	H03M5/12 H03L7/08 H04L7/033
A	EP-A-0 317 159 (AMERICAN TELEPHONE AND TELEGRAPH COMPANY) * page 3, line 4 - line 25 * * page 5, line 58 * ---	1,6,12	
A	US-A-4 789 996 (BUTCHER) * claim 1; figure 3 * ---	1,2	
A	US-A-4 788 605 (SPIESMAN ET AL.) * claim 1 * ---	1	
A	EP-A-0 240 232 (HEWLETT-PACKARD COMPANY) * column 4, line 40 - column 5, line 4 * -----	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
			H03M H04L H03L
Place of search		Date of completion of the search	Examiner
THE HAGUE		30 December 1993	Brunet, L
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X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document	